

No.

9900428



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pioneer Hi-Bred International, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

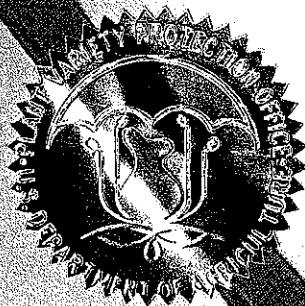
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'25R18'



In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fourth day of April, in the year of our Lord two thousand one.

Attest:

Alvin K. Post

Acting Commissioner
Plant Variety Protection Office
Agricultural Marketing Service


Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Pioneer Hi-Bred International, Inc.		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME 25R18
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Research and Product Development Wheat Research 3850 N. 100 E. Windfall, IN 46076		5. TELEPHONE (include area code) (765) 945-7906	FOR OFFICIAL USE ONLY PVPO NUMBER 9900428
		6. FAX (include area code) (765) 945-8313	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION Iowa	9. DATE OF INCORPORATION May 1926	FILING DATE Sept 24, 1999
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Gregory C. Marshall Pioneer Hi-Bred International, Inc. Wheat Research 3850 N. 100 E. Windfall, IN 46076			FILING AND EXAMINATION FEES: \$ 2450.00 DATE Sept 24, 99 CERTIFICATION FEE: \$ 320.00 DATE 3/30/01
11. TELEPHONE (Include area code) (765) 945-7906	12. FAX (Include area code) (765) 945-8313	13. E_MAIL marshallg@phibred.com	14. CROP KIND (Common Name) Wheat
15. GENUS AND SPECIES NAME OF CROP Triticum aestivum		16. FAMILY NAME (Botanical) gramineae	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no," go to item 22)	
		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO	
		21. IF "YES" TO ITEM 20, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED	
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER	
NAME (Please print or type) Gregory C. Marshall		NAME (Please print or type)	
CAPACITY OR TITLE Coordinator of Wheat Research	DATE 9/22/99	CAPACITY OR TITLE	DATE

16A. Exhibit A. Origin and Breeding History of Pioneer Wheat Cultivar 25R18.

Pioneer® cultivar '25R18', a soft red winter wheat (*Triticum aestivum* L., em Thell) was developed by Pioneer Hi-Bred Int'l., Inc.. Using a pedigree selection breeding method, 25R18 was derived from the cross:

WBG0195E2/2510//2510

WBG0195E2 was derived from the cross: Sumai/2555//2555*3/KS81H1640HF. The cultivar KS81H1640HF is an experimental line from Kansas State University with the parentage: KU221-14 (*Triticum tauschii* accession)/Eagle//NE 73640/3/Cheney. The detailed parentage of 25R18 is:

Sumai/2555//2555*3/3/KU221-14/Eagle//NE 73640/3/Cheney/4/2510/5/2510.

The single cross WBG0195E2/2510 was made in the 1989 fall greenhouse cycle and was designated WBL0084. During the 1990 spring greenhouse cycle the F₁, WBL0084, was crossed with 2510 and the final cross designated WEK0609. The subsequent breeding history of 25R18 is described below.

<u>Year</u>	<u>Generation</u>	
1990	final cross	
1990	F ₁	F ₁ grown in fall greenhouse, inoculated with <i>Fusarium graminearum</i> , resistant plants selected.
1991	F ₂	Selected F ₂ plants grown in spring greenhouse and inoculated with <i>Fusarium graminearum</i> . Resistant plants selected.
1991-92	F ₃	Headrows from F ₂ selections grown at Windfall and Ft. Branch, IN. Selected rows cut and threshed separately. This selection cut at Ft. Branch, IN.
1992	F ₄	F ₄ plants from F ₃ selections grown in fall greenhouse, inoculated with <i>Fusarium graminearum</i> and selected for resistance.
1993	F ₅	F ₅ plants from F ₄ selections grown in spring greenhouse, inoculated with <i>Fusarium graminearum</i> and selected for resistance.
1993-94	F ₆	Headrows of F ₅ selections planted at Windfall and Ft. Branch, IN. Selected rows cut and threshed individually. This selection cut at Ft. Branch, IN.
1994-95	F ₇	Preliminary yield testing of an F ₅ selection from an F ₆ headrow. This selection designated WEK0609H3.
1995-96	F ₈	Advanced yield testing of WEK0609H3. 200 individual spikes harvested from a small bulk increase.

1996-97	F ₉	Elite yield testing of WEK0609H3. 200 headrows planted within a space planted bulk increase. Offtype headrows destroyed prior to maturity. Offtype plants in bulk increase removed from field prior to harvest. Remaining headrows cut and threshed individually. 1000 spikes harvested individually, remaining increase cut in bulk, which constitutes Breeder Seed. Individual spikes, seed from headrows, and bulk seed turned over to Pioneer Parent Wheat Seed Production group.
1997-98	F ₁₀	Elite yield testing continues, line now designated YW574. Seed increase continues by Pioneer Parent Wheat Seed Group.
1998-99	F ₁₁	Elite yield testing continues, line now designated XW574. Seed increase continues by Pioneer Parent Wheat Seed Group.

Decision to release XW574 was made in July 1999 at which time the commercial code, 25R18 was assigned.

The cultivar 25R18 was bred and selected in the F₁, F₂, F₄, and F₅ generations for resistance to Fusarium head blight (scab) and for any and all other traits that were present in the greenhouse environment. 25R18 was selected and bred for any and all of the following characteristics in the field environment: disease resistance, plant type, plant height, head type, straw strength, maturity, grain yield, test weight, and milling and baking characteristics.

25R18 has been shown to be uniform and stable since the 7th generation, or for the last 5 generations. Variants are limited to slightly taller plants or awnless plants, at a frequency no greater than 1/15,000 in total.

16B. Exhibit B. Statement of Distinctness

Pioneer cultivar 25R18 is most similar to Pioneer cultivar '2540' but with the following distinguishing characteristics:

1. The coleoptile color of 25R18 is white while that of 2540 is red.
2. The spike density of 25R18 mid-dense while that of 2540 is dense.
3. The reaction of 25R18 to prevalent races of powdery mildew, (*Blumeria graminis* f.sp. *tritici*) is susceptible while that of 2540 is moderately resistant.
4. The reaction of 25R18 to Fusarium head blight is resistant while that of 2540 is susceptible.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

Form Approved - OMB No. 0581-0055

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L. Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc.	FOR OFFICIAL USE ONLY
ADDRESS (Street and No. or RD No., City, State, and Zip Code) Research and Product Development Wheat Research 3850 N. 100 E. Windfall, IN 46076	PVPO NUMBER 99004-8
	VARIETY NAME 25R18
	TEMPORARY OR EXPERIMENTAL DESIGNATION

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. or) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used: **Munsell Color Charts for Plant Tissues**
Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

1=Common 2=Durum 3=Club 4=Other (SPECIFY): _____

2. VERNALIZATION:

1=Spring 2=Winter 3=Other (SPECIFY): _____

3. COLEOPTILE ANTHOCYANIN:

1=Absent 2=Present

4. JUVENILE PLANT GROWTH:

1=Prostrate 2=Semi-erect 3=Erect

5. PLANT COLOR (boot stage):

1 = Yellow-Green 2 = Green 3 = Blue-Green

6. FLAG LEAF (boot stage):

1 = Erect 2 = Recurved 1 = Not Twisted 2 = Twisted

7. EAR EMERGENCE:

Number of Days Earlier Than _____ *

Number of Days Later Than **2540** _____ *

8. ANTER COLOR:

1

1 = Yellow

2 = Purple

9. PLANT HEIGHT (from soil to top of head, excluding awns): **94 cm**

cm Taller Than _____ *

0 **4**cm Shorter Than **2540** _____ *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

10. STEM:

A. ANTHOCYANIN

1

1 = Absent

2 = Present

B. WAXY BLOOM

1

1 = Absent

2 = Present

C. HAIRINESS (last internode of rachis)

2

1 = Absent

2 = Present

D. INTERNODE (SPECIFY NUMBER)

1

1 = Hollow

2 = Semi-solid

3 = Solid

E. PEDUNCLE

2

1 = Absent

2 = Present

30

cm Length

11. HEAD (at Maturity):

A. DENSITY

2

1 = Lax

2 = Middense

3 = Dense

B. SHAPE

4

1 = Tapering

2 = Strap

3 = Clavate

4 = Other (SPECIFY):

oblong

C. CURVATURE

2

1 = Erect

2 = Inclined

3 = Recurved

D. AWNEDNESS

4

1 = Awnless

2 = Apically Awnletted

3 = Awnletted

4 = Awned

12. GLUMES (at Maturity):

A. COLOR

2

1 = White

2 = Tan

3 = Other (SPECIFY): _____

C. BEAK

3

1 = Obtuse

2 = Acute

3 = Acuminate

B. SHOULDER

2

1 = Wanting

2 = Oblique

3 = Rounded

4 = Square

5 = Elevated

6 = Apiculate

D. LENGTH

1

1 = Short

2 = Medium

(ca. 7mm)

(ca. 8mm)

3 = Long (ca. 9mm)

12. GLUMES (at Maturity) *Continued*:

E. WIDTH

- ☐ 3 1 = Narrow (ca. 3mm) 2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

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13. SEED:

A. SHAPE

- ☐ 1 1 = Ovate 2 = Oval 3 = Elliptical

C. BRUSH

- ☐ 2 1 = Short 2 = Medium 3 = Long

- ☐ 1 1 = Not Collared 2 = Collared

B. CHEEK

- ☐ 1 1 = Rounded 2 = Angular

D. CREASE

- ☐ 1 1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

- ☐ 2 1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. Color

- ☐ 3 1 = White 2 = Amber 3 = Red
4 = OTHER (Specify)

G. PHENOL REACTION (*see instructions*):

- ☐ 4 1 = Ivory 2 = Fawn
3 = Light Brown 4 = Dark Brown
5 = Black

F. TEXTURE

- ☐ 2 1 = Hard 2 = Soft

14. DISEASE: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

- ☐ 2 Stem Rust (*Puccinia graminis* f. sp. *tritici*)
Field races

- ☐ 2 Leaf Rust (*Puccinia recondita* f. sp. *tritici*)
Field races

- ☐ 0 Stripe Rust (*Puccinia striiformis*)

- ☐ 0 Loose Smut (*Ustilago tritici*)

- ☐ 3 Tan Spot (*Pyrenophora tritici-repentis*)
Field races

- ☐ 0 Flag Smut (*Urocystis agropyri*)

- ☐ 0 Halo Spot (*Selenophoma donacis*)

- ☐ 0 Common Bunt (*Tilletia tritici* or *T. laevis*)

- ☐ 3 *Septoria nodorum* (Glume Blotch)
Field races

- ☐ 0 Dwarf Bunt (*Tilletia controversa*)

- ☐ 0 *Septoria avenae* (Speckled Leaf Disease)

- ☐ 0 Karnal Bunt (*Tilletia indica*)

- ☐ 3 *Septoria tritici* (Speckled Leaf Blotch)
Field races

- ☐ 1 Powdery Mildew (*Erysiphe graminis* f. sp. *tritici*)
Field races

- ☐ 2 Scab (*Fusarium* spp.)
Field races

- ☐ 0 "Snow Molds"

14. Disease (Continued) (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

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PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

<input type="checkbox"/> 0 "Black Point" (Kernel Smudge)	<input type="checkbox"/> 0 Common Root Rot (<i>Fusarium</i> , <i>Cochliobolus</i> and <i>Bipolaris</i> spp.)
<input type="checkbox"/> 0 Barley Yellow Dwarf Virus (BYDV)	<input type="checkbox"/> 0 Rhizoctonia Root Rot (<i>Rhizoctonia solani</i>)
<input type="checkbox"/> 2 Soilborne Mosaic Virus (SBMV) Field races	<input type="checkbox"/> 0 Black Chaff (<i>Xanthomonas campestris</i> pv. <i>translucens</i>)
<input type="checkbox"/> 2 Wheat Yellow (Spindle Streak) Mosaic Virus Field races	<input type="checkbox"/> 0 Bacterial Leaf Blight (<i>Pseudomonas syringae</i> pv. <i>syringae</i>)
<input type="checkbox"/> 0 Wheat Streak Mosaic Virus (WSMV)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> Other (SPECIFY)	<input type="checkbox"/> Other (SPECIFY)

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

<input type="checkbox"/> 1 Hessian Fly (<i>Mayetiola destructor</i>) Biotypes E and L	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Stem Sawfly (<i>Cephus</i> spp.)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Cereal Leaf Beetle (<i>Oulema melanopa</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Russian Aphid (<i>Diuraphis noxia</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Greenbug (<i>Schizaphis graminum</i>)	<input type="checkbox"/> Other (SPECIFY)
<input type="checkbox"/> 0 Aphids	<input type="checkbox"/> Other (SPECIFY)

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

16D. Exhibit D. Additional Description of the Variety**1. Yield and Agronomic information.**

Preliminary yield testing of 25R18 began in the 1994-95 growing season and wide scale testing has been conducted from the 1995-96 growing season to the present. It has shown adaptation to the northern soft wheat regions based on tests conducted in Missouri, Illinois, Indiana, Ohio, and Michigan (Table 1).

2. Information on reaction to major diseases.

Leaf rust – very good resistance to prevalent races in the northern soft wheat region.

Powdery mildew – susceptible to the prevalent isolates of powdery mildew in the soft wheat region.

Soilborne and wheat spindle streak mosaic virus – very good resistance to both viruses.

Leaf blights – very good tolerance to the complex of most common organisms that cause leaf blights including: *Septoria tritici* blotch, *Stagnospora nodorum* blotch, and tan spot.

Fusarium head blight – excellent resistance especially to spread of the disease within the spike.

3. Information on reaction to major insects.

Hessian fly – susceptible to the predominant biotypes of Hessian fly in the northern soft wheat region. Has screened susceptible to biotypes E, and L in tests conducted by the Dept. of Entomology, Purdue University, in conjunction with the USDA-ARS Insect and Weed Control unit.

4. Information on Milling and Baking Qualities.

25R18 has demonstrated good milling and baking qualities (Table 2).

25R18

Table 1. Varietal and yield performance and agronomic characteristics from Pioneer Elite yield tests during the period 1996-1999.

Variety	Grain Yield	Test Weight	Winter Survival	Plant Height	Heading Date	Powdery Mildew	Leaf Rust	Leaf Blight	Scab Incidence	SSMV	SBMV
	bu/ac	lb/bu	1-9 [@]	cm	Jan. 1	1-9 [@]	1-9 [@]	1-9 [@]	1-9 [@]	1-9 [@]	1-9 [@]
25R18	75.8	57.4	6.5	94	135.9	3.3	8.0	6.8	8.0	7.3	6.5
2540	83.9	55.9	7.0	98	134.8	7.8	5.4	5.3	4.0	7.9	6.8
25R26	85.7	54.9	8.0	92	135.2	6.3	8.9	4.2	5.8	7.9	6.8
25R57	83.6	55.8	5.5	100	130.9	7.8	6.6	5.0	3.5	4.6	3.7
lsd (0.05)	2.7	0.59	1.3	2.8	1.1	0.8	1.1	1.2	2.2	0.7	1.0
# environ.	35	30	1	7	6	2	6	3	2	8	3
# years	3	3	1	3	3	1	3	2	2	2	3

[@] Scale of 1 - 9 where 9 = excellent or resistant, 1 = poor or susceptible.

SBMV data gathered at the University of Illinois SBMV nursery.

Data in above table gathered at Carlisle, IN, Ft. Branch, IN, Howe, IN, Westport, IN, Altamont, IL, Mascoutah, IL, Ridgway, IL, Blissfield, MI, Truxton, MO, Bucyrus, OH, Greenville, OH and Hamler, OH.

Table 2. Soft wheat quality data from the Pioneer Quality lab, Johnston, IA 1996-1998.

Variety	Flour Yield	Break Flr Yld	Flour Protein	AWRC	Cookie Diam.	Milling Score	Bake Score
	%	%	%	%	cm	1-9 [@]	1-9 [@]
25R18	68.7	37.4	7.8	58.0	19.1	5	5
2540	69.1	38.1	8.4	55.7	19.1	5	6
25R26	70.7	38.3	8.0	56.0	18.2	6	3
25R57	70.2	38.7	8.0	53.5	19.1	6	7
# observ.	8-14	8-16	8-16	8-16	6-14		

Number of observations for 25R18 are in bold.

Trait abbreviations used in the above table:

AWRC = Alkaline Water Retention Capacity.

Cookie = Cookie diameter in cm.

Milling yield = a score which weights flour yield 60% and brak flour yield 40%.

(1 = poor, 9 = excellent)

Baking score = a rating which weights cookie spread 60% and AWRC 40%.

(1 = poor, 9 = excellent)

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) Pioneer Hi-Bred International, Inc.	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME 25R18
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) Research and Product Development Wheat Research 3850 N. 100 E. Windfall, IN 46076	5. TELEPHONE (include area code) (765) 945-7906	6. FAX (include area code) (765) 945-8313
7. PVPO NUMBER 9900428		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
9. Is the applicant (individual or company) a U.S. national or U.S. based company? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country		
10. Is the applicant the original owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no, please answer one of the following: a. If original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. national(s)? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country b. If original rights to variety were owned by a company(ies), is(are) the original owner(s) a U.S. based company? <input type="checkbox"/> YES <input type="checkbox"/> NO If no, give name of country		
11. Additional explanation on ownership (if needed, use reverse for extra space):		

PLEASE NOTE:

Plant variety protection can be afforded only to owners (not licensees) who meet one of the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

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